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ABSTRACT

This paper outlines the current state of higher education for deaf students in Germany. While no special universities exist in Germany for the deaf, numerous special provisions such as note-takers and interpreters are made available at regular universities, subject to budgetary constraints. The fact that no single German sign language has yet been universalized is a special challenge faced by these students. A program has been developed to train deaf students in commercial and technical skills that are needed in more than one trade. These skills include economical thinking, problem solving and decision making, communication and cooperation, initiative, flexibility, and creativity. Students complete a project analyzing the flow of information in a commercial enterprise from the receipt of a sales order to successful delivery of the requested product, examining each step in the process from a market-driven, buyer-oriented perspective. (PB)

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18th INTERNATIONAL CONGRESS ON EDUCATION OF THE DEAF, TEL-AVIV

"TECHNICAL EDUCATION FOR DEAF STUDENTS AROUND THE WORLD AT COLLEGE/UNIVERSITY LEVEL - THE GERMAN EXAMPLE"

Ladies and Gentlemen,

To this day, the integration of the deaf in society and in the culture of our country has always been the declared goal of any educational attempts we have undertaken. This in mind, the German government has consistently followed the path of job-based integration, as opposed to segregation. We try to give each person the best education possible in view of her or his individual talents and on the basis that all humans are equal. All along, Germany has favoured the dual educational system, the main feature of which is the three to three-and-a-half-year training at two different sites, the workplace and the vocational school. At the end of the training there will be an examination which represents the best guarantee for employment and promotional prospects. Based upon the right of free choice of profession every German national is accorded constitutionally, we attempt the integration also of the deaf into this process of vocational resp. professional training in order to enable her or him to lead a life of freedom and dignity later on and to participate in the life and culture of her or his people - in spite of their impairment.

Since the year 1980, the opportunity of taking the 'Abitur' has been open to the deaf. More than 300 candidates have obtained this qualification at the "Rheinisch-Westfälische Berufsschule" (Vocational School of Rhineland and Westphalia) in Essen since then. The 'Abitur' is the highest level of general education to be had in the German-speaking area and it is usually written after 13 years of general education and represents the entrance to

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college resp. university studies. Our students come from various backgrounds: They either completed their general education up to the point where they qualify for the four years at the "Kolleg" or they come from the sector of dual vocational education. In case of the latter, they would have undergone a three-year apprenticeship - together with non-hearing-impaired trainees in a vocation belonging to the sectors trade, industry or administration. It is a great advantage that the 'Rheinisch-Westfälische Berufsschule' in Essen can offer training opportunities for 140 recognised vocations.

The four-year "Kolleg" in Essen which students usually enter at the age of 18 offers four different fields of specialisation which all lead to the 'Abitur' and which can be chosen freely. These are: natural science; economics; education; social science. The final examination consists of two parts, an oral one and a written part. The standard of this examination is equal to that at a "Kolleg" for the non-hearing-impaired and just as this one qualifies the successful candidate for studies at a college or university.

There is no deaf people's university in Germany, instead our school leavers study at the 'normal' universities and colleges. Meanwhile, numerous services are available to the deaf which make studying easier for them. Among the most important are: The deaf person is entitled to the services of an interpreter; he or she is allowed a note-taker, at least for a certain number of hours; as a rule, the professor will provide her or him with the scripts of the lectures; and he or she is entitled to the assistance of a tutor. However, all these services are laid down explicitly by the state and are subject to budgetary means. Thus, studying at a university or college is a matter of enormous difficulties for the deaf. As compared to their American peers, German students have to cope with a further problem: There is no single sign language in our country. However, such a system (DGS) is being developed at present. As a rule, the deaf student would have received oral teaching during her or his schoolyears, perhaps "signed German" (or "manual codes in German") would have been used. The deaf student in Germany studying at a 'normal' university is very

proud of her or his knowledge of lip-reading and the ability to get along needing none of the above-mentioned services, and they describe this as one of their most prominent advantages.

Since the year 1980, deaf university graduates have proved extremely successful in their jobs. The fact that less than 10 per cent among this group are unemployed demonstrates their enormous willingness for high performance.

Let me now describe as an example a project of our practical research at the Vocational School for Rhineland and Westphalia in order to show how practice- and future-oriented our attempts are when we prepare our students for their working life resp. university studies.

The abbreviation 'ZUK' stands for "Zukunftssicherung hörbehinderter Arbeitnehmer in kaufmännischen und technischen Berufen durch berufsfeldübergreifendes Lernen", it is a scheme for securing a future for hearing-impaired employees in commercial and technical vocations by way of training them in skills that are needed in more than one trade. It is a three-year experimental scheme for the hearing impaired, carried out in collaboration with the University of Heidelberg and funded by the Federal Ministry for Labour and Social Affairs.

Any vocational training today is compelled to equip the young with skills that these can build on in their jobs of tomorrow. The world of work is undergoing rapid changes at the moment, people speak of "systematic change". Therefore, the focus in vocational training has today shifted from teaching specific trade-oriented facts (even though the knowledge of these continues to be indispensable) to imparting key qualifications. Focusing on key qualifications or on non-trade-specific qualifications, as they might be called, wishes to enable the young to 'stand the tests' of their future working lives.

Wide consensus in society is required in order to identify such key qualifications if they are to be realised later on. The Volkswagen car works have tried to specify these within the

framework of their experimental project 'WOKI' being part of their in-company vocational training programme. According to these definitions, the main objective of training as "Industriekaufmann", i.e. a commercial employee in an industrial firm, is to achieve the highest possible degree of (inner) autonomy. Key qualifications to this end are:

- economical thinking
- capability of problem-solving and decision-taking
- capability to communicate and to cooperate
- self initiative and direct responsibility
- flexibility / creativity.

Analysing these key qualifications clearly shows that beside the personal aspects (e.g. willingness to communicate and to cooperate), there is a considerable amount of knowledge to be obtained with respect to operational linkages which goes beyond a single vocational field. This is where the research project 'ZUK' with its model training firm 'EMV' sets in.

The main concern of the ZUK project is to impart competence for action to the participant that goes beyond the requirements of a single department. Here, the non-subject-related approach of the "Kolleg" proves a welcome advantage.

In order to give all participants adequate foundations, the ZUK model attempts to provide operational facts in their complexity and interlinking, simplified to a certain extent as is necessary in a model situation. The basis is an industrial firm in the metal branch. On the basis of such a company model, fundamental operational linkages are demonstrated to the participant (e.g. what are the effects of my actions on other sectors of the enterprise?). Further, participants are to receive wider knowledge of certain special areas (what do I have to do in order to...?)

The concept of this model training firm, the Essen Metal Works (EMV), was drawn up by using methods of informatics, especially methods of software engineering (e.g. the interactive cataract model). However, these methods were not only used in the devel-

opment of the project, but at the same time they are part and parcel of the project itself, which means that they will have to be understood and duplicated by the students themselves, at least in part.

Similar to a teaching concept, the procedure of this project can be divided into the following stages:

- technical analysis
- didactical analysis
- concretising of the model and of the training situations
- evaluation.

The student is meant to provide her/himself with an overview of the operational sectors of the firm and in how far there exists an interlinking between them.

The simplest and most vivid method for this is to try and show the different operational sectors graphically - more or less in the form of a shop or building plan.

The basis for these activities is the market, i.e. the desires of the buyer. In almost all companies, a shift has taken place from a purely product-oriented approach to a market-oriented one or rather a buyer-oriented approach. For the time being, considerations of marketing have been left aside in our model. Nevertheless, it seemed to be important to develop a model illustrating the flow of information in a company, such as the EMV, applying a market-oriented approach. Starting from the receipt of an order in the sales department, the flow of data between the different departments of the firm resulting from this occurence were to be demonstrated.

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Original in German
English translation

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